

REMARKS
Charles A. LeMaistre, M.D.
City of Houston
Council Committee on Environmental & Public Health Hearing
Thursday, August 24, 2006

Good afternoon, I am Dr. Charles LeMaistre. I thank the Committee for the opportunity to speak on the overall effects of second-hand smoke. I strongly support Mayor White's goal of a comprehensive smoking ban for Houston and wish to thank both Chair Alvarado and Councilmember Sekula-Gibbs for their leadership. Previously, I served for 18 years as President of The University of Texas M. D. Anderson Cancer Center and currently serve in Clinical Cancer Prevention as a faculty member.

I was one of the 10 members of the first U.S. Surgeon General's Advisory Committee on Smoking and Health, appointed by President Kennedy, that wrote the original report summarizing research that indicted cigarettes as the major cause of lung cancer. That report was issued January 11, 1964 and has been followed by many subsequent reports that expand and extend the devastation to human health caused by tobacco smoke. Despite years of incremental progress, smoking continues to take a tremendous toll on the health of our citizens and on the economy of Houston and Harris County.

Over 440,000 Americans will die this year from diseases either caused by smoking, or by non-smokers inhaling second-hand tobacco smoke. Sadly, about 44.5 million (21%) of American adults are still smokers, so the threat to non-smokers from inhalation of air polluted by tobacco smoke remains real and widespread.

M. D. Anderson became one of the first employers in this city and one of the first hospitals in the nation to go tobacco-free in 1989. While that may have been a bold move 17 years ago, today we know it as common sense. It is time for the rest of the employers and the City of Houston itself to adopt a comprehensive ordinance that protects the health of all citizens, especially our non-smokers who are exposed to the toxins and cancer-causing chemicals present in the smoke of others.

You have been provided with a model ordinance drafted by the Americans for Nonsmokers Rights. The model ordinance is the sum of the successful experiences with smoke-free ordinances throughout the U.S. It has been carefully reviewed to provide wording that is clear, succinct and legal. It stands in sharp contrast to Houston's current ordinance, which I am told is difficult even for lawyers to understand. After you have heard all who wish to testify, it is my hope that the model ordinance will replace the current ordinance.

Today, I come before you to offer science-based information, which concludes that tobacco smoke breathed by the non-smoker results in great harm to both the economic future, and the health future, of Houston's citizens.

Over the past 42 years, the harmful effects of cigarette smoking have been carefully documented in the most thorough scientific investigation in medical history. In June 2006, Surgeon General Carmona's report on second-hand smoke added another milestone in the documentation. The six major conclusions of this report and the evidence that supports each conclusion have been delivered to you. Should you wish, I will be glad to review them with you after my remarks.

Today, the smoking of tobacco is the single most preventable cause of death in the U.S. In addition, the inhalation of second-hand tobacco smoke has the dubious distinction of being the third-ranked most preventable cause of death.

Cigarette smoking causes at least 87% of lung cancer deaths and lung cancer is the number one cancer killer of men and women.¹ Tobacco smoke is also responsible for many other cancers.^{2,3,4} To put it simply, tobacco use causes over 30% of all cancers.¹ Treatment of this cancer toll is costly in all respects, financially and emotionally for the patients, their caregivers and for their employers.

Unfortunately, the health risks caused by cigarette smoke are not limited to just those who smoke. Among adults, second-hand smoke kills approximately 53,000 non-smokers each year in the U.S. For every eight smokers who die from tobacco use, one non-smoker also is killed. Non-smokers who live with smokers are 20-30 times more likely to develop lung cancer than other non-smoking adults.

More than 126 million non-smoking Americans are regularly exposed to someone else's tobacco smoke, whether they like it or not. Forty-three percent of U.S. non-smokers have detectable levels of a nicotine derivative in their blood. Even brief exposure to second-hand smoke can cause immediate harm, especially in terms of cardiovascular damage.

Food service workers – thousands of citizens who work in restaurants, clubs and bars – have a 50% increase in lung cancer risk due to tobacco smoke exposure.⁴

One hour in the non-smoking section of a restaurant that allows smoking is as harmful as smoking 1 cigarette; 2 hours in a smoky bar is equivalent to smoking 4 cigarettes.⁵

There is no safe amount of tobacco smoke. Ventilation cannot provide a safe environment.

¹ Society for Public Health Education. News and Views, July/August 2006, vol. 33, #4

2. Report on Carcinogens, Eleventh Edition; U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program .

3. National Cancer Institute website, www.cancer.gov. Accessed 8/16/06

⁴ Brownson, R. C., M. P. Eriksen, et al. (1997). "Environmental tobacco smoke: health effects and policies to reduce exposure." Annual Review of Public Health 18: 163-85.

⁵ Seigel M. (1983). Journal of American Medical Association. 240:490-493.

Why is second-hand smoke so harmful? The reason is simple: second-hand smoke is that mixture of the smoke from the end of a cigarette, burning at a lower temperature, with the smoke inhaled by a smoker and then exhaled into the ambient air. The smoke unfiltered by the human lung contains the highest concentration of toxins and cancer-causing chemicals. Therefore, the burning cigarette in an ashtray, or being stylishly held in the hand, exposes both the smoker and the non-smoker to the greatest concentration of harmful chemicals and to the greatest risk. The smoke that the non-smoker breathes is a complex mixture of more than 4000 chemicals, including at least 250 toxic or cancer-causing agents.

Also consider another harmful impact- to each taxpayer.

The annual state and federal tax burden caused by health related costs of tobacco is \$89 billion.⁶ Annual health care expenditures in Texas alone directly related to tobacco use is \$4.5 billion.⁷

The ultimate solution to the tobacco problem is threefold: first, protect the non-smoker from air polluted by tobacco smoke; second, free the addicted smoker from nicotine dependence, and third, raise a non-smoking generation of young Houstonians. The first is your responsibility. You may be assured M. D. Anderson and others are making progress on the second and third solutions and will see them through until we have a smoke-free society.

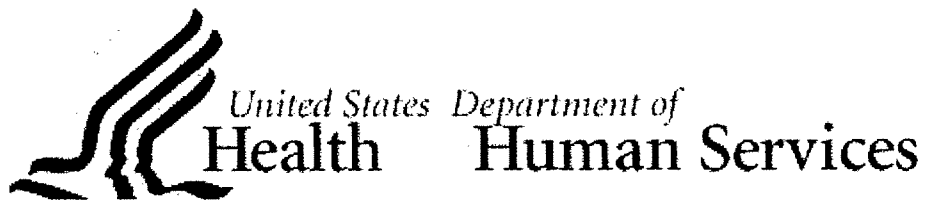
Some 17 states and more than 400 cities, towns and counties have already passed very strong no smoking laws. The entire country of Ireland is smoke-free. As the Surgeon General's report concludes, the message to local governments is plain: "The only way to protect ... citizens is (through) comprehensive smoke-free laws."

In 2005, Houston took one step forward to establish an initial commitment to the concept of a city free from the dangers of tobacco smoke. Now is the time to complete the process by establishing an ordinance with appropriate enforcement infrastructure. That will add Houston to the extensive national map of cities that already have made a commitment (1) to the prevention of cancer and cardiovascular disease and improved air quality for our citizens, and (2) to the visitors who chose Houston as a destination for vacations, meeting sites or to move their businesses or their families.

The only way to eliminate the danger is to prevent indoor smoking. Adoption of the model ordinance by the Houston City Council will move Houston to the forefront of U.S. cities that care about the health and environment of its citizens.

⁶ International Agency for Research on Cancer. *Tobacco Smoke and Involuntary Smoking*, vol. 83

⁷ Texas Department of State Health Services *Fact: Tobacco Use is a Tremendous Burden to All Texans*, tobacco.free@dshs.state.tx.us



6 Major Conclusions of the Surgeon General Report

Smoking is the single greatest avoidable cause of disease and death. In this report, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General*, the Surgeon General has concluded that:

- 1. Many millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces despite substantial progress in tobacco control.**

Supporting Evidence:

- Levels of a chemical called cotinine, a biomarker of secondhand smoke exposure, fell by 70 percent from 1988-91 to 2001-02. In national surveys, however, 43 percent of U.S. nonsmokers still have detectable levels of cotinine.
- Almost 60 percent of U.S. children aged 3-11 years—or almost 22 million children—are exposed to secondhand smoke.
- Approximately 30 percent of indoor workers in the United States are not covered by smoke-free workplace policies.

- 2. Secondhand smoke exposure causes disease and premature death in children and adults who do not smoke.**

Supporting Evidence:

- Secondhand smoke contains hundreds of chemicals known to be toxic or carcinogenic (cancer-causing), including formaldehyde, benzene, vinyl chloride, arsenic, ammonia, and hydrogen cyanide.
- Secondhand smoke has been designated as a *known human carcinogen* (cancer-causing agent) by the U.S. Environmental Protection Agency, National Toxicology Program and the International Agency for Research on

Cancer (IARC). The National Institute for Occupational Safety and Health has concluded that secondhand smoke is an occupational carcinogen.

3. Children exposed to secondhand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.

Supporting Evidence:

- Children who are exposed to secondhand smoke are inhaling many of the same cancer-causing substances and poisons as smokers. Because their bodies are developing, infants and young children are especially vulnerable to the poisons in secondhand smoke.
- Both babies whose mothers smoke while pregnant and babies who are exposed to secondhand smoke after birth are more likely to die from sudden infant death syndrome (SIDS) than babies who are not exposed to cigarette smoke.
- Babies whose mothers smoke while pregnant or who are exposed to secondhand smoke after birth have weaker lungs than unexposed babies, which increases the risk for many health problems.
- Among infants and children, secondhand smoke cause bronchitis and pneumonia, and increases the risk of ear infections.
- Secondhand smoke exposure can cause children who already have asthma to experience more frequent and severe attacks.

4. Exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer.

Supporting Evidence:

- Concentrations of many cancer-causing and toxic chemicals are higher in secondhand smoke than in the smoke inhaled by smokers.
- Breathing secondhand smoke for even a short time can have immediate adverse effects on the cardiovascular system and interferes with the normal functioning of the heart, blood, and vascular systems in ways that increase the risk of a heart attack.
- Nonsmokers who are exposed to secondhand smoke at home or at work increase their risk of developing heart disease by 25 - 30 percent.
- Nonsmokers who are exposed to secondhand smoke at home or at work increase their risk of developing lung cancer by 20 - 30 percent.

5. The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke.

Supporting Evidence:

- Short exposures to secondhand smoke can cause blood platelets to become stickier, damage the lining of blood vessels, decrease coronary flow velocity reserves, and reduce heart rate variability, potentially increasing the risk of a heart attack.
- Secondhand smoke contains many chemicals that can quickly irritate and damage the lining of the airways. Even brief exposure can result in upper airway changes in healthy persons and can lead to more frequent and more asthma attacks in children who already have asthma.

6. Eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposures of nonsmokers to secondhand smoke.

Supporting Evidence

- Conventional air cleaning systems can remove large particles, but not the smaller particles or the gases found in secondhand smoke.